

CLAIMS:

1-40 (canceled)

- 41.** (new) A drug delivery system comprising nanoparticles or microparticles of a poorly soluble drug dispersed in a polymeric hydrophilic bead and a disintegrate mixed with the bead .
- 42.** (new) A drug according to Claim 41, wherein the polymeric bead consists essentially of a single species of hydrophilic polymer.
- 43.** (new) A drug delivery system according to Claim 42, wherein the polymeric bead is selected from: a polysaccharide polymer, a synthetic polymer, and a protein.
- 44.** (new) A drug delivery system according to Claim 41, wherein the poorly soluble drug is selected from: simvastatine, statines, risperidone, carvedilol, carbamazepine, oxcarbazepine, zaleplon, galantamine, anti Alzheimer, anti epileptic, anti parkinsonian, and other used for CNS indications.
- 45.** (new) A drug delivery system according to Claim 41, wherein the nanoparticles are in an amorphous, non crystalline state which enhances dissolution of the drug.
- 46.** (new) A drug delivery system according to Claim 41, further comprising a crosslinker.
- 47.** (new) A drug delivery system according to Claim 41, wherein the crosslinker is a multivalent cation.
- 48.** (new) A drug delivery system according to Claim 41, wherein the disintegrate is capable of breaking the crosslinking by replacing or chelation of the crosslinking multivalent cation.
- 49.** (new) A drug delivery system according to Claim 41, wherein the disintegrate is a calcium chelator.
- 50.** (new) A drug delivery system according to Claim 41 wherein the beads are gelatin beads.
- 51.** (new) A drug delivery system comprising an active ingredient dispersed within a crosslinked polymeric bead wherein the crosslinking is by a cation selected

from calcium, iron, magnesium and copper and wherein the drug delivery system further comprises as a disintegrant a chelator of calcium.

52. (new) A drug delivery system according to Claim 51, wherein the active ingredient is a poorly soluble drug.

53. (new) A drug delivery system according to Claim 52, wherein the poorly soluble drug is in the form of nanoparticles.

54. (new) A method for producing the drug delivery system of Claim 41, comprising:

(i) providing poorly water soluble drug dissolved in organic volatile solvent or mixture of organic volatile solvent with co-solvent that is either miscible or immiscible with water, optionally in the presence of at least one surfactant;

(ii) mixing the drug containing solvent with an aqueous phase comprising at least one surfactant and optionally co-solvent and other emulsification aids at such conditions in which an oil-in-water nanoemulsion or microemulsion is formed;

(iii) mixing the oil-in-water nanoemulsion or microemulsion with water-soluble bead forming polymers to produce a continuous phase of the emulsion which is capable of forming a bead;

(iv) providing conditions enabling bead formation from the continuous phase of (iii) containing nano- microemulsion droplets;

(v) optionally evaporating the volatile organic solvent and the water, thereby obtaining dry beads containing in the polymeric bead dispersed nanoparticles of poorly water soluble drugs.

55. (new) A method according to Claim 54, wherein the mixing of the poorly water soluble drug in an organic solvent occurs in the presence of at least one surfactant.

56. (new) A method according to Claim 54, wherein the drug containing solvent is mixed within an aqueous phase containing a surfactant, the aqueous phase further containing a co-surfactant and/or co-solvent, and/or electrolytes.

- 57.** (new) A method according to Claim 54, wherein the nanoemulsion is prepared by homogenization by a high pressure homogenizer or by a phase inversion method.
- 58.** (new) A method according to Claim 54, wherein the microemulsion is formed spontaneously by proper selection of the surfactants, solvent, co-solvent and co-surfactants.
- 59.** (new) A method according to Claim 54, wherein at step (iv) the beads are incubated under suitable conditions and for suitable periods of time, with external crosslinking agents.
- 60.** (new) A method according to Claim 59, wherein the polymer is an anionic polymer and external crosslinkers are multivalent cations selected from calcium, magnesium, copper, iron, barium and salts of these cations.
- 61.** (new) A method according to Claim 59, wherein the polymer is a cation polymer and external crosslinkers are polyvalent anions selected from polyanions or sodium tripolyphosphate.
- 62.** (new) A method for producing a pharmaceutical composition comprising packing the beads obtained in Claim 54 within a capsule or tablet.
- 63.** (new) A method according to Claim 62, wherein disintegrator is added to the dry beads prior to packing the beads in a capsule or tablet.
- 64.** (new) A method according to Claim 63, wherein the disintegrator is selected from chelators and molecules capable of replacing the crosslinking ions.